

Attorney Docket No.: 821-55**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant: Max Krogager.

Group Art Unit: 1732

Serial No: 10/767,598

Examiner: Daniels, Matthew J.

Filed: January 29, 2004

For: **A REPAIR METHOD**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

DECLARATION

I, Max Krogager, do hereby declare:

1. I am one of the joint inventors of the invention being claimed in the above-identified patent application;
2. I have read and understand the Office Action mailed August 8, 2006 by the Patent and Trademark Office in the above-identified application and the art being applied therein, namely, Russell (Composite Repair Issues on the CF-18 Aircraft, AGARD Conference Proceedings, Vol. 550, pages 14-1 to 14-8) (herein referred to as "Russell").
3. The present invention provides distinct and important improvement in a repair method for components consisting of laminates of composite material with high demands upon strength. The method comprises producing connection

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paths in the form of thin slots or fissures making the laminate permeable to gas and/or liquid, so that a connection path between the exterior of the laminate and a pore is achieved. The thin slots or fissures produced by the claimed method are used instead of the considerably coarser drilling holes of Russelll, the thin slots or fissures resulting in flowing materials being drawn into the laminate through capillary effects.

4. One explicit advantage of my invention is reaching pores within the laminate structure without having coarse or large holes in the laminate.

5. The micro slots created by the method of the present invention create cracks filled up by flowing material over the entire area of the laminate, penetrating every delamination in the structure.

6. Russelll fails to teach or suggest to me, one skilled in the art, the use of thin slots or fissures in the laminate and accompanying advantages, for the following reasons;

7. In particular, Figure 5 of Russelll shows a schematic drawing of a laminate structure which does not illustrate any micro slots, thin slots or fissures. Instead, the lines in Figure 5 represent large fissures/slots of the boundaries between the layers in the structure, since otherwise the slots would have extensions all the way through the composite material.

8. Contrary to the assertions made in the Office Action mailed August 8, 2006, Russelll does not disclose thin slots/fissures but instead Figure 5 shows bores. The use of bores by Russelll involves searching and striking the end portions of fissures/slots corresponding to the lines in Figure 5 of Russelll.

9. In stark contrast to Russelll, the use of micro slots according to the present invention advantageously allows the flowing material itself to seek out the

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delaminations over the entire area and not just near the area the bores as in Russell.

10. Therefore, Russell explicitly teaches a method for repairing laminate structures on CF-18 aircrafts using large bores to repair cracks in the lamination as illustrated in Figure 5 instead of thin slots/fissures as in the present invention. Hence, Russell would lead me, one skilled in the art, away from practicing my invention.

11. All statements made herein of my own knowledge are true and all statements made on information and belief are believed to be true; and further these statements are made with knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and such willful false statement may jeopardize the validity of the application or any patent issued thereon.

2006-12-06

Date


Max Krogager